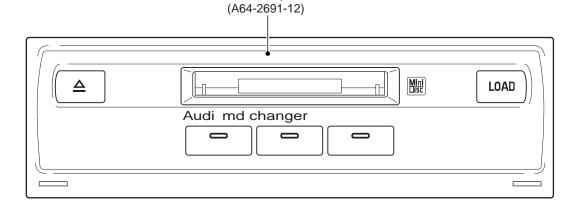
# KMD-300/GD2 SERVICE MANUAL

# KENWOOD

© 2003-11 CREATED IN JAPAN B53-0110-00 (N) 0

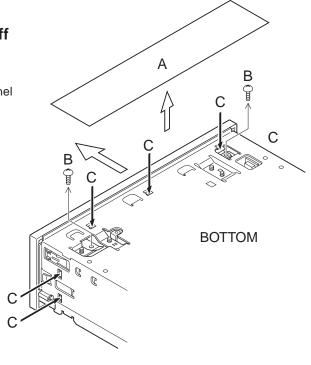
### **Audi GENUINE**



Panel assy

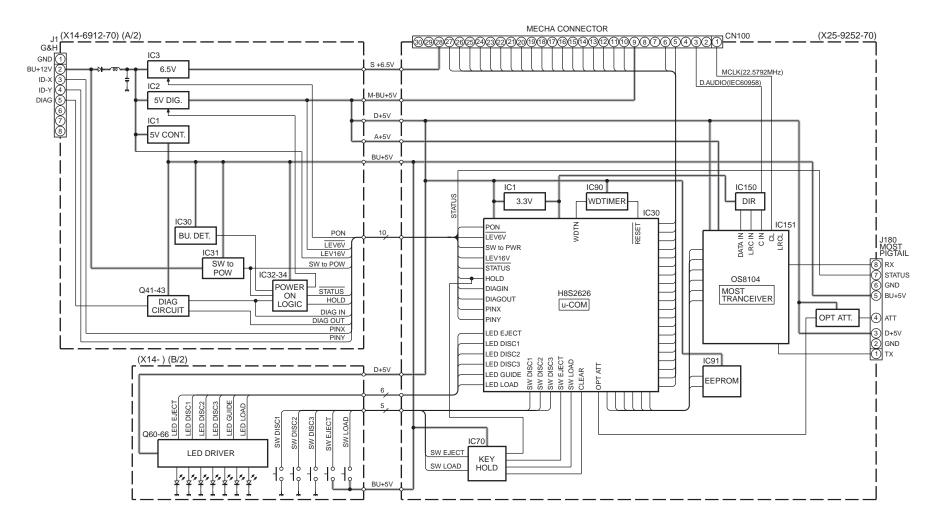
### How to Take the Panel Assembly Off

- 1) Take the sheet (A) off.
- 2) Remove screw (B).
- 3) While pressing on the hook (C), take the panel assembly off.





# **BLOCK DIAGRAM**



# **COMPONENTS DESCRIPTION**

### ● DISPLAY UNIT (X14-6912-70)

Ref. No.	Application/Function	Operation /Condition/Compatibility
IC1	Stabilized power supply	Supplies Bu +5V to IC30, IC31, IC32, IC33, IC34, etc.
IC2	Stabilized power supply	Supplies D.+5V to X25 board
IC3	Stabilized power supply	Supplies +6.5V to mechanism X33
IC30	Reset IC	OUT=H when BU+5V is above 4.2V
IC31	1 pulse oscillation	Oscillates 1 pulse at rise of BU
IC32	NOT circuit	((~STATUS     DIAG     Sw to Pow) &&-LEV6)     HOLD=H, then D.+5V ON
IC33	OR circuit	((~STATUS     DIAG     Sw to Pow) &&-LEV6)     HOLD=H, then D.+5V ON
IC34	D flip-flop	Detects downward slope of J1 DIAG
Q1	Switch	Q1 base =L, then LEV16=12V
Q2	NOT circuit	Q2 base =H, then Q1 base =L
Q40	NOT circuit	J1 DIAG=L, then IC33 A3 input=H
Q41	NOT circuit	CN1 DIAGOUT=H, then J1 DIAG=L
Q42	Excess current protection	Limit Q41 emitter current
Q43	NOT circuit	J1 DIAG=L, then CN1 DIAGIN=H
Q60	Switch	CN2 LED1=H, then D60 lights up.
Q61	Switch	CN2 LED2=H, then D61 lights up.
Q62	Switch	CN2 LED3=H, then D62 lights up.
Q63	Switch	CN2 LED4=H, then D63 lights up.
Q64	Switch	CN2 LED5=H, then D64 lights up.
Q65	Switch	CN2 LED6=H, then D65 lights up.
Q66	Switch	CN2 LED6=H, then D66 lights up.

### ● ELECTRIC UNIT (X25-9252-70)

Ref. No.	Application/Function	Operation /Condition/Compatibility
IC1	Stabilized power supply	Supplies 3.3V to IC30 and IC150.
IC30	μ-com	Controls various sections of the set.
IC70	D flip-flop	Detects rise of key input for LOAD/EJECT
IC71	NAND circuit	IC70 CLR=~ (IC90 RESET&&IC30 CLEAR)
IC90	RESET IC	D+5V is above 4.2V, then RESET=H.
IC91	EEPROM	Saves backup data.
IC150	DIR	Converts IEC60958 (SPDIF) signal to 3-line serial.
IC151	MOST transceiver	Signal processing IC for optical input/output
Q30	Switch	PF3=L, then AVREF ON.
Q70	NOT circuit	CN70 EJECT=H, then IC30 EJECT=L
Q71	NOT circuit	CN70 LOAD=H, then IC30 LOAD=L
Q180	NOT circuit	MOST ATT=H, then Q181 base=L
Q181	Switch	MOST ATT=H, then increase optical output.

# MICROCOMPUTER'S TERMINAL DESCRIPTION

### ● MICROCOMPUTER: HD64F2626FA20I(X25:IC30)

Pin No.	Pin Name	I/O	Application
1	ATT	0	MOST TX attenuate
2	MOST_INT	1	MOST data reception interrupt
3	BEEP	0	BEEP output
4	ERROR	1	MOST error signal
5	DIR_CS	0	DIR CS
6	VCC1		
7	HTxD		
8	VSS1		
9	HRxD		
10	MMUTE	I	Mechanism mute detection
11	SS1_SW	I	Stock1 Detection of disk/No disk SW
12	SS2_SW	I	Stock2 Detection of disk/No disk SW
13	SS3_SW	ı	Stock3 Detection of disk/No disk SW
14	MS_SW	ı	EJECT complete detection SW
15	VSS2		'
16	FS_SW	1	LOAD start detection SW
17	PVCC1		
18	OS_SW	ı	Wrong direction detection SW
19	NC		
20	MSTOP	0	Mechanism control Wake Up
21	MRST	0	Mechanism control RESET
22	MO	0	M1, M2, M3 control output
23	M1	0	LO/EJ control output
24	M2	0	Mechanism roller attach control output
25	M3	0	Mechanism rising order control output
26	NC		mostismon romg of sor control caspat
27	NC		
28	MSDA	I/O	Mechanism I2C data
29	MSCL	I/O	Mechanism I2C clock
30	DIR_ERR	1	DIR error
31	DIR_TX	0	DIR control output
32	DIR_RX	1	DIR control input
33	DIR_CLK	0	DIR clock
34	SDA SDA	I/O	MOST I2C data
35	SCL	I/O	MOST I2C clock
36	LED1	0	MD1 eject SW LED
37	VSS3		
38	LED2	0	MD2 eject SW LED
39	PVCC2		
40	LED3	0	MD3 eject SW LED
41	LED4	0	Load SW LED
42	LED5	0	Eject SW LED
43	LED6	0	Insert slot LED
44	CLEAR	0	Hard key buffer clear
45	MOST_WRITE		Train noy button oloui
46	NC		
47	TXD	0	Flash writer data output
48	RXD	1	Flash writer data input
49	NC	'	i lasti willor data liiput
50	OSC1		
50	0001		

# MICROCOMPUTER'S TERMINAL DESCRIPTION

Pin No.	Pin Name	I/O	Application
51	OSC2		
52	PVCC3		
53	MD0		
54	VSS4		
55	MD1	I	μ-com mode switching
56	MD2	I	μ-com mode switching
57	PLLVSS		
58	PLLCAP		
59	PLLVCC		
60	RES	I	μ-com resetting
61	NMI		
62	STBY		
63	VCC2		
64	XTAL		
65	VSS5		
66	EXTAL		
67	FEW	I	Flash write enable
68	NC		
69	PON	0	Peripheral circuit power supply control
70	SA_SW	0	SA switch
71	HOLD_SW	0	SD switch
72	LPSCO	0	Vref control
73	WDT_OFF	0	Watch dog timer count output
74	DIAG_OUT	0	DIAG output
75	DIAG_IN	I	DIAG input
76	AVCC		
77	Vref	ı	Reference voltage input
78	MLPS	I	Mechanism location position detection
79	PS_SW	I	Play position detection of disk/No disk SW
80	LS_SW	ı	Load complete SW
81	CS_SW	I	roller attach/detach SW
82	BU_DET	I	Power supply +B input
83	LEV16	I	Power supply voltage detection
84	NC		
85	LEV_6	I	Power supply voltage <6V
86	DISK1	I	MD1 select SW
87	DISK2	I	MD2 select SW
88	DISK3	I	MD3 select SW
89	LOAD	I	LOAD SW
90	EJECT	I	Eject SW
91	SW_TO_PW	I	Power supply control
92	ID-X	I	Unit position detection
93	ID-Y	I	Unit position detection
94	AVSS		
95	VSS6		
96	WDTOVFA		
97	PVCC4		
98	NC		
99	STATUS		MOST status
100	MOST_RST		MOST reset

### **TEST MODE**

### 1. TEST MODE

MDC possesses test mode functions for production purposes. There are three test modes: production line test mode, mechanism operation test mode, and shipping mode. As shown in Figure 1, it is possible by using the keys to shift to each of these modes.

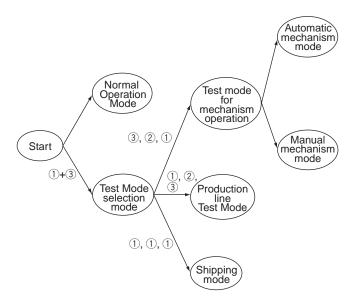


Figure 1 Test Mode conditioned flowchart

### 1.1. Test Mode selection mode

In this unit, there are but five keys: LOAD, UNLOAD, ① (DISC SELECT LEFT KEY), ② (DISC SELECT CENTER KEY), and ③ (DISC SELECT RIGHT KEY). After installation of the unit by the user, if direct switching to the Test Mode were enabled by combining these five keys, it is possible to shift accidentally into the Test Mode. This is because of the simplicity of the input method.

To avoid this problem, use Test Mode selection. This mode condition is achieved by enabling key input during the Test Mode. In other words, no direct switching to the Test Mode is done. This Test Mode selection mode prevents the user from entering the Test Mode inadvertently.

### 1.1.1 How to enter the Test Mode selection mode

With the MOST Tx Output (Light) on, by simultaneously depressing the ① and ③ keys and by resetting or turning the power on, Test Mode selection mode is achieved.

Or with the MOST Tx Output (Light) off, by simultaneously depressing the ①, ③, and LOAD keys and resetting or turning the power on, the Test Mode selection mode is also achieved.

### 1.1.2 How to exit the Test Mode selection mode

The following are ways to move out of the Test Mode selection mode. The operation after exiting the mode will be the same as after hardware resetting. The unit must be reset in the final stage of the Test Mode.

- 1. By resetting the system
- 2. By changing MOST Tx=On to MOST Tx=Off
- 3. By a momentary power outage
- After entering this mode, when there is no effective key input for ten or more seconds
- After entering this mode, when there is no ineffective key input

### 1.1.3 Initial condition after entering the Test Mode

The 1, 2, 3, LOAD, and UNLOAD keys have LED's (red and red only) installed.

Also, one LED (red and red only) is placed on each side of the disk insertion slot.

When the Test Mode selection mode is entered, all LED's light up.

### 1.2. Shipping Mode

When transporting MD Changer units, their mechanisms are subject to vibrations and shocks. These could damage the MD Changer mechanisms (including the servo system and pickup). Therefore, before transporting the units, it is necessary to place the mechanisms in positions that are most vibration and shock resistant. The Shipping Mode causes the mechanism to shift into ideal, optimally robust shipping positions.

### 1.2.1 How to enter the Shipping Mode

In the Test Mode selection mode with no disk in the unit, the selection mode can be entered by pressing the ① key three times.

### 1.2.2 How to exit the Shipping Mode

By resetting the system or by turning on the power, the Shipping Mode is released and the mechanism returns to its initial position.

Accordingly, after confirming that the mechanism has entered the Shipping Mode, the power should be turned off.

Table 1 MD Changer (Shipping Mode) Key description

Key	Mode Description
#1 #1 #1	MD Changer Mechanism are put into shipping
	position.

### **TEST MODE**

Table 2 Flow of MD Changer Conditions (Shipping Position)

Disk	MD Changer Condition	Display	
Condition	MD Changer Condition	Display	
Out	Receiving signal to shift	#1 blinks with 500ms	
	to shipping position	interval	
	Shifting	#1 blinks with 500ms	
		interval	
	Shifting successfully	#1 lights up	
	completed.		
	Shifting unsuccessful	#1, #2, and #3 blink	
		at 500ms intervals	
In	Ineffective (any one of the		
	switches of the mechanism		
	is on).		

### 1.3. Production Line Test Mode

### 1.3.1 How to enter the production line Test Mode

In the Test Mode selection mode, with LED's for the ①, ②, and ③ keys alight, it is possible to enter the production line Test Mode by consecutively pressing the ①, ②, and ③ keys. As these inputs are made, each LED on these keys lights up, enabling key input confirmation. Also, when the production line Test Mode is entered by effective key input, the LED's that had remained unlit light up.

If incorrect keys were pressed or no effective key input were made for ten consecutive seconds, the Test Mode selection mode is released. In this case the Test Mode selection mode must be reentered to enable Test Mode entry.

### 1.3.2 How to enter the production line Test Mode

The following are ways to release the production line Test Mode selection mode. Ideally, the condition after exiting the Test Mode should be the same as after resetting the hardware by means of the program. This, however, cannot always be achieved at present.

Accordingly, it is necessary to reset the system in the final process of the Test Mode. (This excludes the case of setting the mechanism to transport position.)

- 1. By resetting the system
- 2. By changing MOST Tx=On to MOST Tx=Off
- After entering the Test Mode, when an ineffective key was pressed

### 1.3.3 Initial condition in the production line Test Mode

In the Test Mode, there is no special initial setting. (This is other than the initial setting of normal units.) To indicate, however, that the Test Mode has been entered, all LED's on the  $\bigcirc$ ,  $\bigcirc$ , and  $\bigcirc$  keys will light up.

### 1.3.4 Display (LED)

LED installation on the ①, ②, and ③ keys can be checked. With all disks removed, press any of the ①, ②, or ③ keys and lift your finger within one second. This causes the LED corresponding to the pressed key to go from "off" to "lighting up" to "blinking," and to "off."

When and if a disk or disks are present, the LED will light up according to the disk condition. (The condition according to normal operational specifications will follow.)

Inasmuch as the LED's are also used for judging key input, no judgment results when there is a key-input problem.

Accordingly, if no judgment were possible, a disk must be inserted into the desired position and appropriate key input made. Confirm that disk ejection is possible.

### 1.3.5 Keys

To ensure that the conductance of the ①, ②, ③, LOAD, and UNLOAD keys is satisfactory, with all disks removed, press any of the ①, ②, ③, LOAD, and UNLOAD keys and lift your finger within one second. Then confirm that the LED corresponding to the pressed key will proceed from "off" to "lighting up" to "blinking," and to "off."

Inasmuch as this is the same as evaluating the display (LED's), if a problem exists with the LED, no evaluation can be conducted.

Accordingly, if no evaluation were possible, a disk must be placed into the desired position and appropriate key input made. Be sure that the disk can be ejected.

When and if the ①, ②, and ③ keys are depressed for more than one second, the Stock and Stock Position Confirmation Modes will be entered, as described below.

### 1.3.6 MD servo

After disk-loading, playing starts at Track No. 7.

The following key operations are begun by commands from the control unit and are conducted only when the source is the MD Changer.

Even when the playing track number is changed other than by the keys (commands) described below, the playing condition will persist.

### 1.3.7 Mechanism transport position

Refer to "1.2 Shipping Mode."

To enter this mode, press the ① key and hold it down one or more seconds.

### **TEST MODE**

# 1.4 Test mode for MD Changer mechanism operation

# 1.4.1 How to enter the Test Mode for MD Changer mechanism operation

After selecting the Test Mode selection mode, while the LED's for the  $\bigcirc$ ,  $\bigcirc$ , and  $\bigcirc$  keys are lighting up, consecutively press the  $\bigcirc$ ,  $\bigcirc$ , and  $\bigcirc$  keys. The Test Mode for MD Changer mechanism operation can then be entered.

During key input, the LED corresponding to the key goes out, enabling key input confirmation.

After effective key input, when the Test Mode for the MD Changer mechanism operation is entered, all unlit LED's will light up.

In case of an error in key input, or no effective key input were conducted for ten or more consecutive seconds, the Test Mode selection mode is released. It is then necessary to restart from the setting for the Test Mode selection mode.

Table 3 Test Mode input procedure for MD Changer mechanism operation

Procedure		Key (result) /				
and result	Status and Operation		LED (● light up)			
and result		1	2	3		
1	In Test Mode selection mode	-	-	-		
'	III rest wode selection mode	•	•	•		
2	③ key input	7	7	3		
	S key input	•	•			
3	② key input	7	4	7		
3	Les regulipat	•				
4	① key input	5	7	7		
4	Ney Input					
5	Test Mode for MD Changer	-	-	-		
3	mechanism operation	•	•	•		
6	Elapse of ten seconds	7	7	7		
	Liapse of tell seconds	0	0			
7	Release of the Test Mode	-	-	-		
	selection mode		O			

# 1.4.2 Releasing the Test Mode for MD Changer mechanism operation

The following methods release the Test Mode for MD Changer mechanism operation. Ideally, the condition after exiting the Test Mode should be the same as after resetting the hardware by means of the program. This, however, cannot always be achieved at present Below are ways to release the production line Test Mode selection mode.

The system must always be reset after the final process in the Test Mode. When, however, desiring to enter the transport position, simply shut off the power after confirming that the mechanism will shift into the transport position. Remember that, when resetting after shifting into the transport position, the unit will return to the initial position.

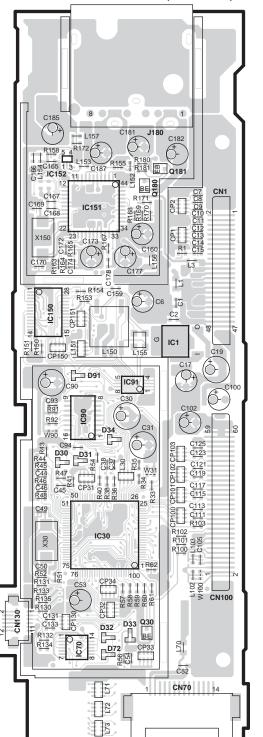
- 1. By resetting the system
- After setting this mode, no effective key input is made for ten seconds.
- After entering the Test Mode, an ineffective key was pressed.

# 1.4.3 Initial condition of the Test Mode for MD Changer mechanism operation

There is no special initial setting in the Test Mode. Nevertheless, to indicate that the Test Mode has been entered, all LED's installed on the ①, ②, and ③ keys will light up.

# **PC BOARD** (COMPONENT SIDE VIEW)

ELECTRIC UNIT X25-9252-70 (J74-1528-12)



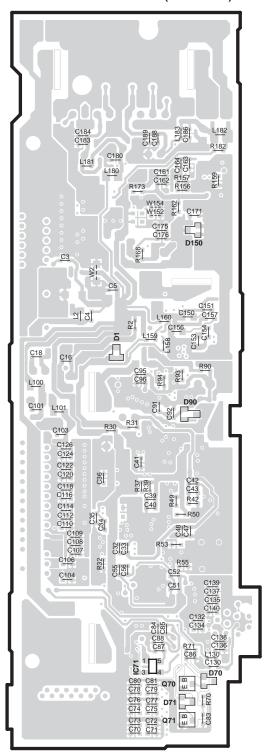
### X25-9252-70

6

X20 0202 10								
IC	Q	Address	IC	Q	Address			
1		4B	151		3B			
30		5B	152		2A			
70		6A		30	5B			
90		4B		180	3B			
91		4B		181	2B			
150		3A						

# (FOIL SIDE VIEW)

ELECTRIC UNIT X25-9252-70 (J74-1528-12)

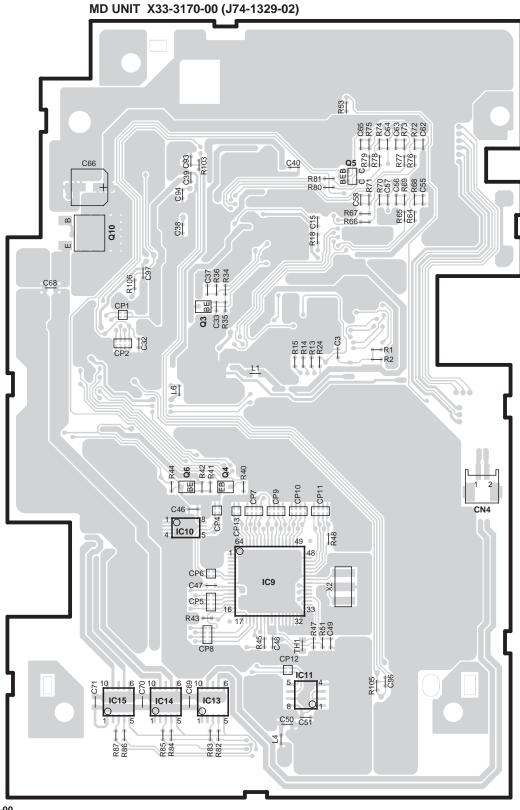


X25-9252-70

	IC	Q	Address
l	71		6D
		70	6D
		71	6D
ľ			

Refer to the schematic diagram for the values of resistors and capacitors.

# PC BOARD (COMPONENT SIDE VIEW)



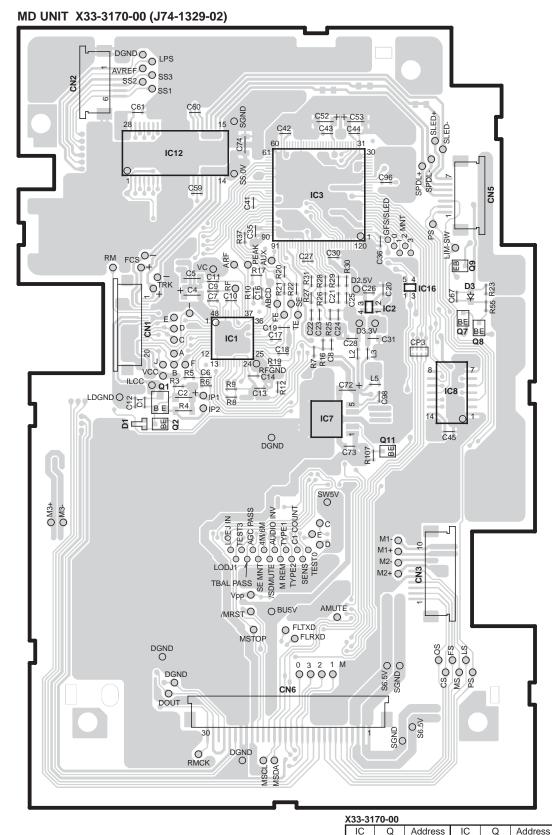
V22 24	70.00
X33-31	70-00

IC	Q	Address	IC	Q	Address
9		5H		3	3H
10		5H		4	4H
11		6H		5	21
13		6H		6	4H
14		6H		10	3G
15		6G			

Refer to the schematic diagram for the values of resistors and capacitors.

# PC BOARD (FOIL SIDE VIEW)

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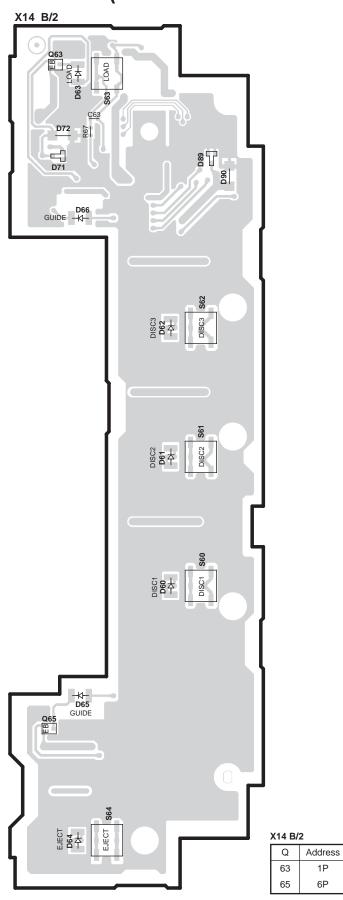


	10	Q	Audiess	10	Q	Addiess
1	1		3M		1	4L
	2		3N		2	4L
	3		2M		7	3N
	7		4M		8	3N
	8		4N		9	3N
	12		2L		11	4N
	16		3N			

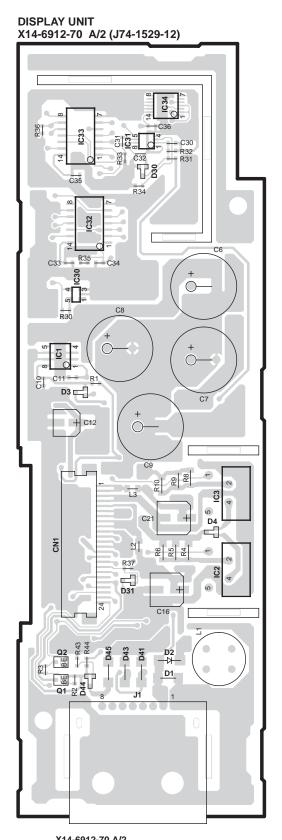
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# PC BOARD (COMPONENT SIDE VIEW)



Refer to the schematic diagram for the values of resistors and capacitors.



X14-09	12-70 /	<del>1</del> /2			
IC	Q	Address	IC	Q	Address
1		3S	32		2S
2		5T	33		2S
3		4T	34		2T
30		3S		1	6S
31		2S		2	5S

6

2

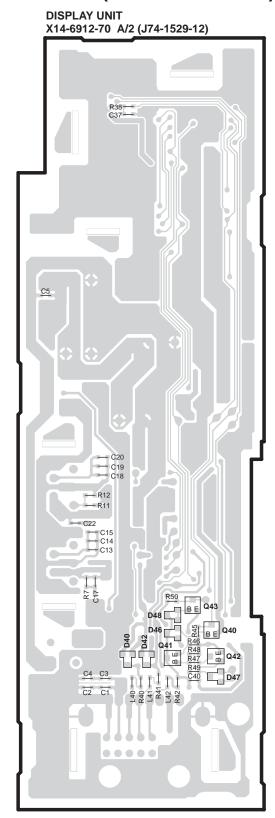
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# PC BOARD (FOIL SIDE VIEW)

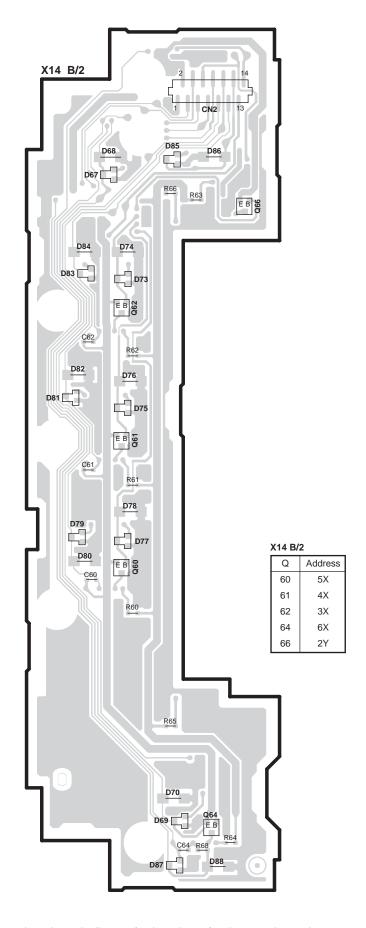
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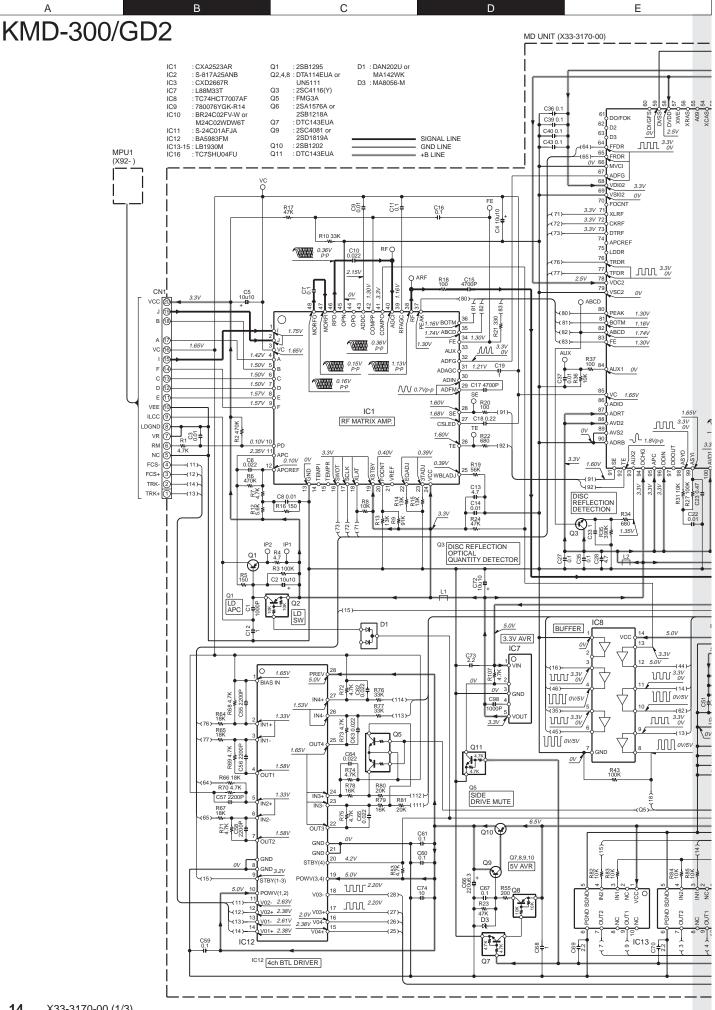
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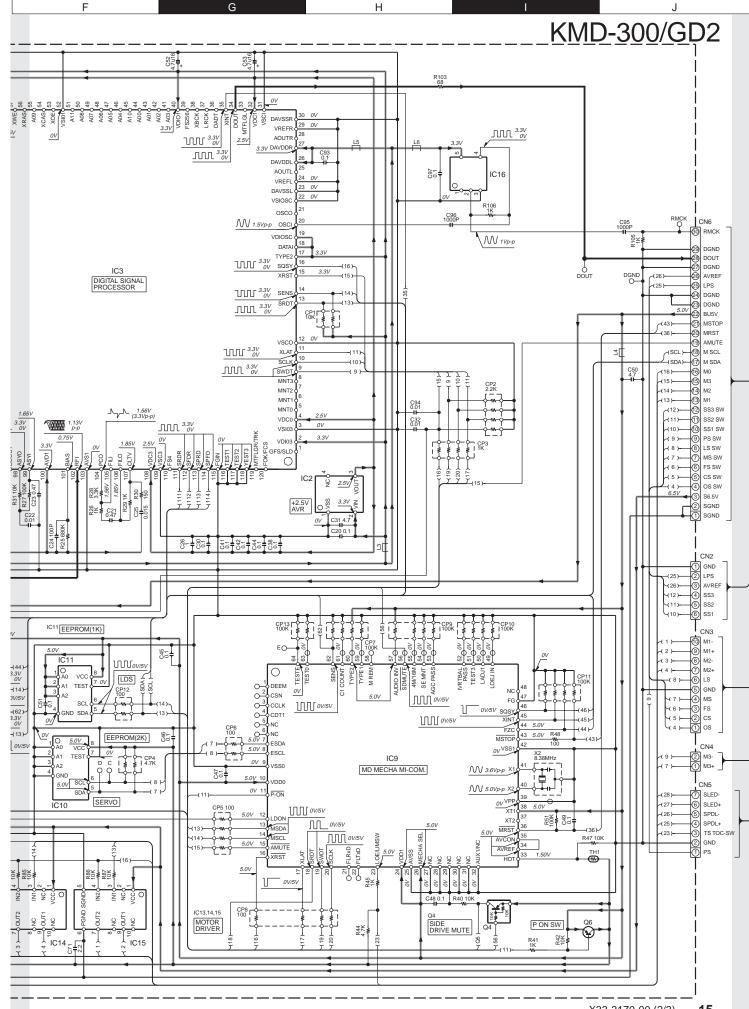


### X14-6912-70 A/2

Q	Address	Q	Address
40	5V	42	5V
41	5V	43	5V









SS1

SS3

LS <sub>MS5</sub>

MS4 MS

MS3

ELEVATOR

LOAD/EJECT

MODE CHANGE

CS MS2

SLED MOTOR

SLED+

MM1 SPINDLE MOTOR

PS

SS1

SS3

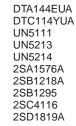
LPS

GND

MS

ND ND ND NO TOP ST JTE CL DA

SW SW SW SW SW SW SW SV





X25-CN100 3/3

2SB1202



FMG3A

2SC4081

0



DTA114EUA DTC143EUA

S-24C01AFJA

DAN202U

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4



DAP202U

DA204U

DTC144EUA





MA142WA MA142WK





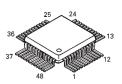




TC7SH08FU



CXA2523AR



TC7S00F



PST9142NR



TC7SHU04FU



TC7WH123FU



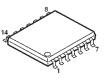
LB1930M



L88M33T



SN74LV74APWR



CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).

△ Indicates safety critical components. To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

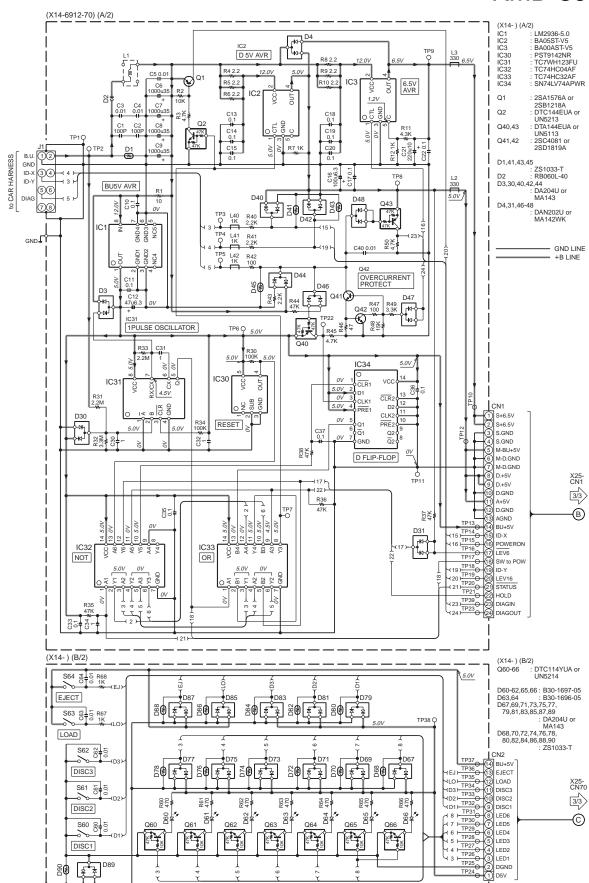
• DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.

6

TS TOC-SW

GND

TS TOC-SW



R

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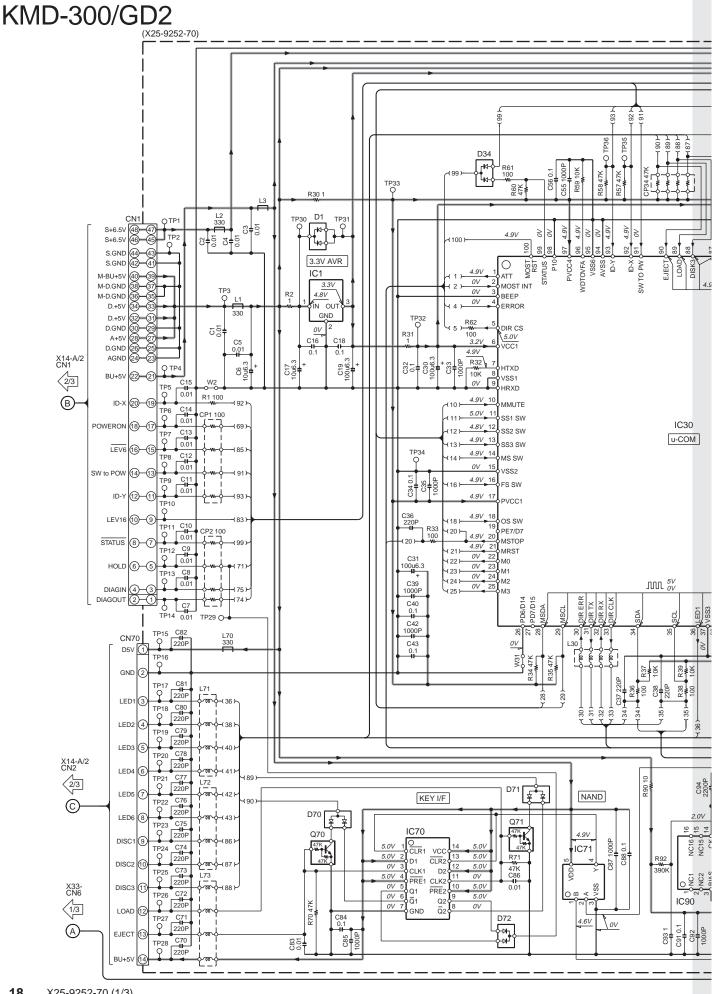
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**CAUTION :** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).

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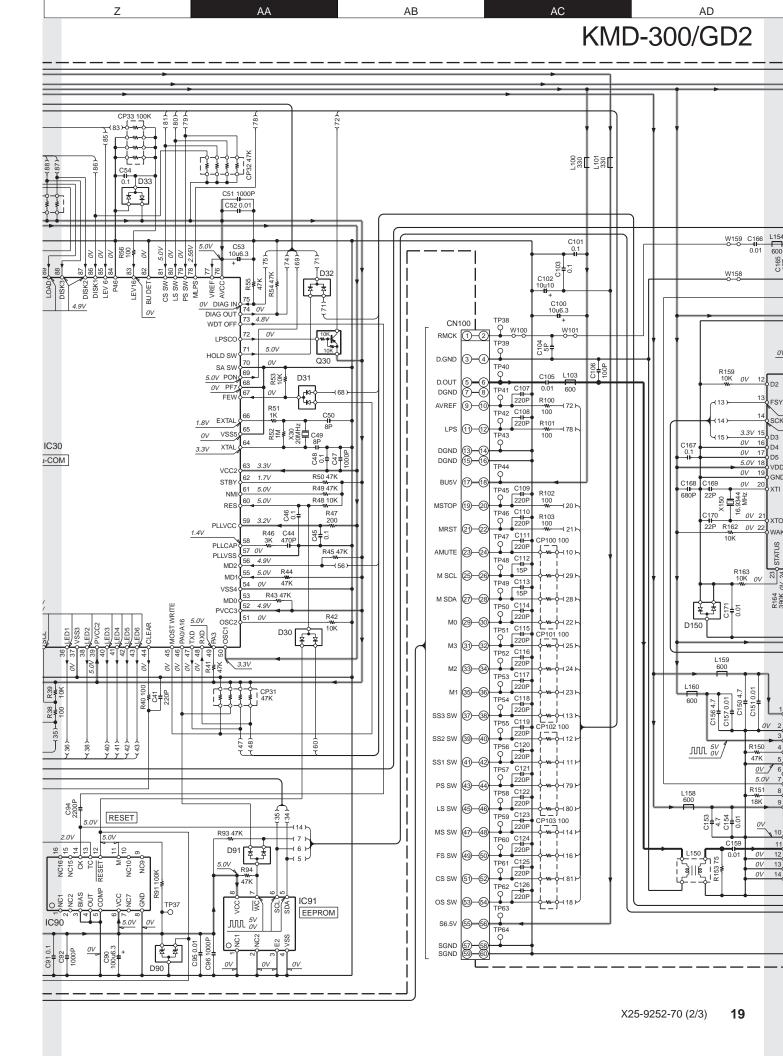
KMD-300/GD2 (2/3)

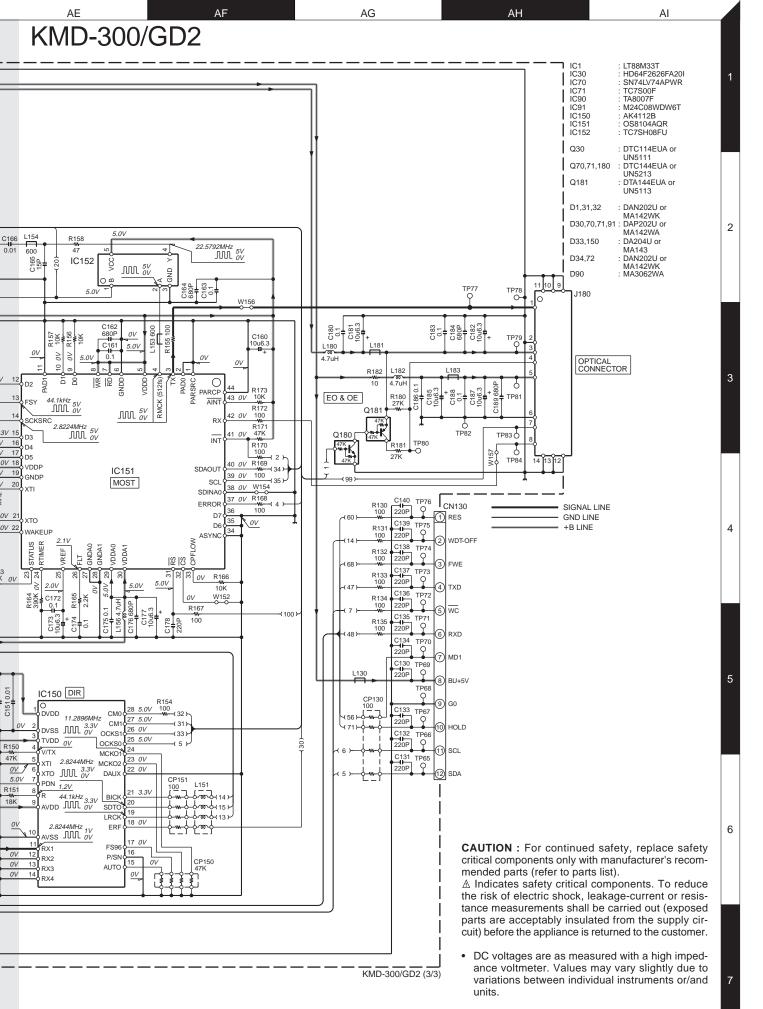
<sup>•</sup> DC voltages are as measured with a high impedance voltmeter. Values may vary slightly due to variations between individual instruments or/and units.



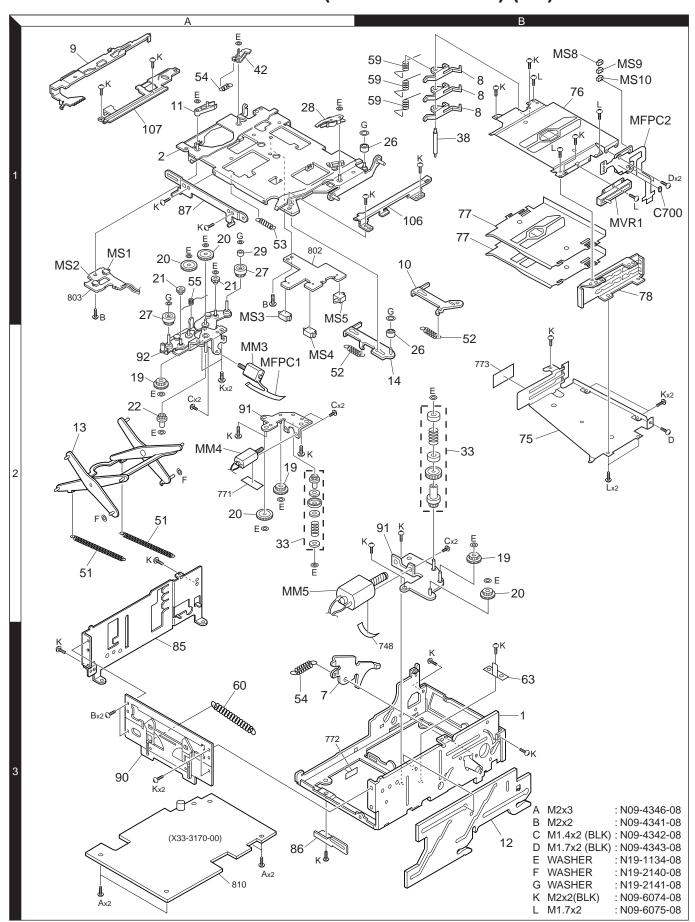
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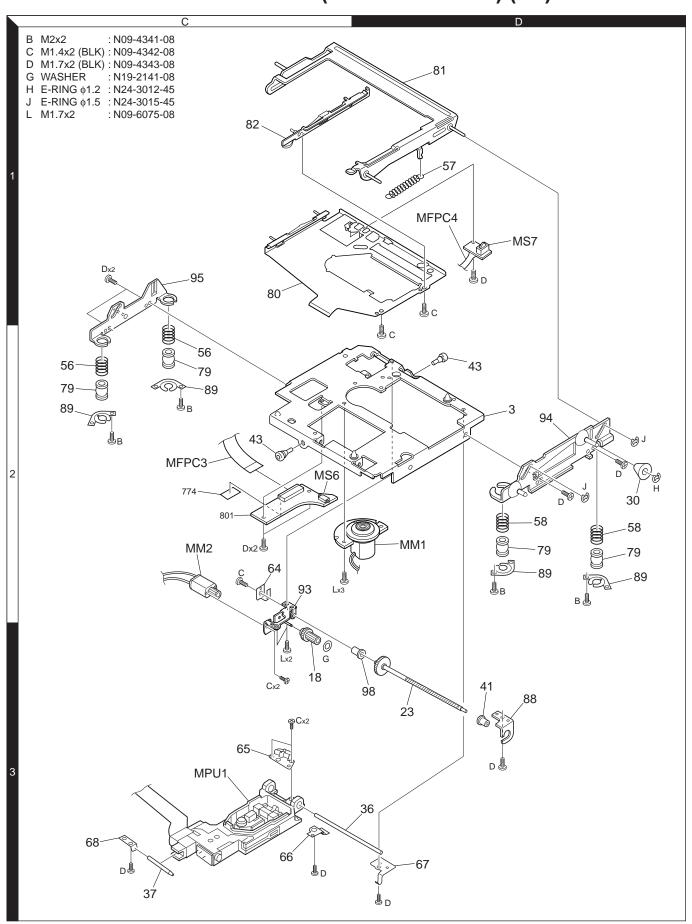




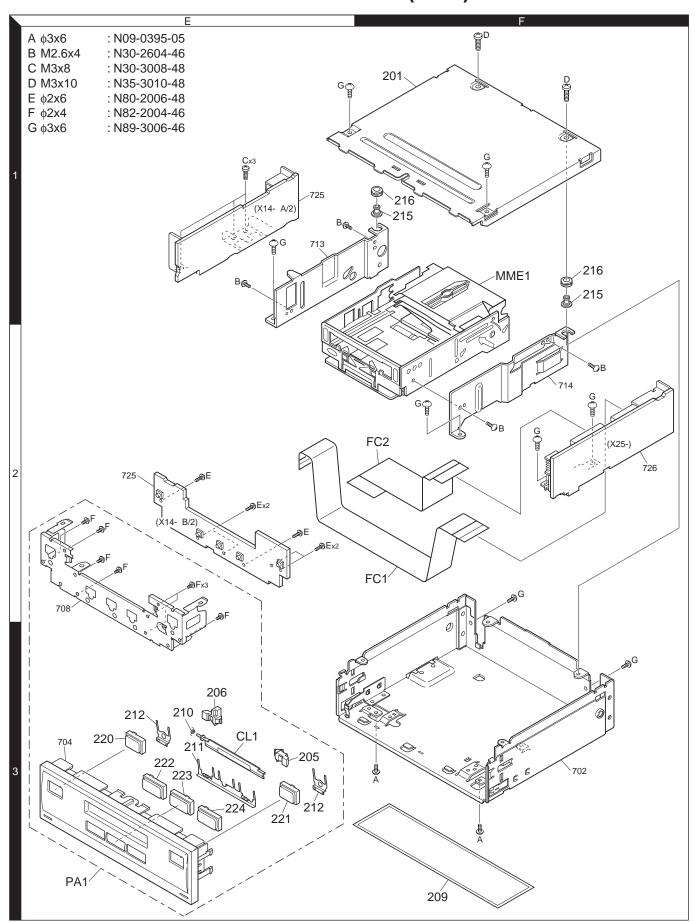
# **EXPLODED VIEW (MD MECHANISM) (1/2)**



# **EXPLODED VIEW (MD MECHANISM) (2/2)**



# **EXPLODED VIEW (UNIT)**



# **PARTS LIST**

\* New parts
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Teile ohne Parts No. werden nicht geliefert.

Ref. No.   A   N   Pa		Parts No.	Description	Desti- nation	
			KMD-30	00/GD2	
201 CL1 PA1	1F 3E 3E	* * *	A01-2794-12 A53-1705-03 A64-2691-12	METALLIC CABINET CASSETTE LID PANEL ASSY	
205 206	3E 3E	*	B19-2141-04 B19-2142-04	LIGHTING BOARD LIGHTING BOARD	
FC1 FC2	2F 2F	*	E39-0446-05 E39-0560-05	FLAT CABLE (24P) FLAT CABLE (30P,140MM)	
209	3F	*	F20-2167-04	INSULATING SHEET	
210 211 212	3E 3E 3E	*	G01-2922-04 G02-1437-04 G02-1438-04	TORSION COIL SPRING FLAT SPRING FLAT SPRING	
- - -		*	H10-4829-02 H10-4830-02 H25-1132-04	POLYSTYRENE FOAMED FIXTURE POLYSTYRENE FOAMED FIXTURE PROTECTION BAG (0.3X280X450)	
215 216	1F 1F	*	J39-0850-04 J42-0632-05	SPACER BUSHING	
220 221 222 223 224	3E 3E 3E 3E 3E 3E	I	K24-3858-13 K24-3859-13 K24-3860-13 K24-3861-13 K24-3862-13	KNOB (EJECT) KNOB (LOAD) KNOB (L) KNOB (C) KNOB (R)	
A B C D E	3F 1E 1E 1F 2E	*	N09-0395-05 N30-2604-46 N30-3008-48 N35-3010-48 N80-2006-48	TAPTITE SCREW (3X6,B) PAN HEAD MACHINE SCREW PAN HEAD MACHINE SCREW BINDING HEAD MACHINE SCREW PAN HEAD TAPTITE SCREW	
F G	2E 3F		N82-2004-46 N89-3006-46	BINDING HEAD TAPTITE SCREW BINDING HEAD TAPTITE SCREW	
MME1	1F	*	X92-4560-00	MECHANISM ASSY	
			DISPLAY UNIT	(X14-6912-70)	
D60-62 D63,64 D65,66		* * *	B30-1697-05 B30-1696-05 B30-1697-05	LED (5.5MA) LED (2MA) LED (5.5MA)	
C1,2 C3-5 C6-9 C10 C11		*	CC73GCH1H101J CK73GB1H103K C90-5681-05 CK73GB1H104K CK73GB1C104K	CHIP C 100PF J CHIP C 0.010UF K ELECTRO 1000UF 35WV CHIP C 0.10UF K CHIP C 0.10UF K	
C12 C13-15 C16 C17 C18-20			C92-1603-05 CK73GB1H104K C92-1407-05 CK73GB1C104K CK73GB1H104K	ELECTRO 47UF 6.3WV CHIP C 0.10UF K ELECTRO 100UF 6.3WV CHIP C 0.10UF K CHIP C 0.10UF K	
C21 C22 C30-32 C33 C34			C92-1425-05 CK73GB1C104K CK73GB0J105K CK73GB1C104K CK73GB0J105K	ELECTRO 220UF 10WV CHIP C 0.10UF K CHIP C 1.0UF K CHIP C 0.10UF K CHIP C 1.0UF K	

Ref. No.	A d d	N e w	Parts No.	0	escripti	on		Desti- nation
C35-37 C40 C60-64	-		CK73GB1C104K CK73GB1H103K CK73GB1H103K	CHIP C CHIP C CHIP C	0.10U 0.010 0.010	UF	K K K	
CN1 CN2 J1		*	E40-9527-05 E41-0038-05 E58-0927-05	FLAT CABL SOCKET FOR	OR PIN	ASS	Ϋ́	
L1 L2,3 L40-42		*	L33-1018-05 L92-0383-05 L92-0385-05	CHOKE CO CHIP FERF CHIP FERF	RITE			
R1 R2 R3 R4-6 R7			RK73GB2A100J RK73GB2A103J RK73GB2A472J RK73EB2E2R2J RK73GB2A102J	CHIP R CHIP R CHIP R CHIP R CHIP R	10 10K 4.7K 2.2 1.0K	] ] ]	1/10W 1/10W 1/10W 1/4W 1/10W	
R8-10 R11 R12 R30 R31			RK73EB2E2R2J RK73GB2A432J RK73GB2A102J RK73GB2A104J RK73GB2A225J	CHIP R CHIP R CHIP R CHIP R CHIP R	2.2 4.3K 1.0K 100K 2.2M	J J J	1/4W 1/10W 1/10W 1/10W 1/10W	
R32 R33 R34 R35-38 R40,41		*	RK73GB2A335J RK73GB2A225J RK73GB2A104J RK73GB2A473J RK73GB2A222J	CHIP R CHIP R CHIP R CHIP R CHIP R	3.3M 2.2M 100K 47K 2.2K	J J J	1/10W 1/10W 1/10W 1/10W 1/10W	
R42 R43 R44 R45 R46			RK73GB2A101J RK73GB2A222J RK73GB2A473J RK73GB2A472J RK73GB2A470J	CHIP R CHIP R CHIP R CHIP R CHIP R	100 2.2K 47K 4.7K 47	J J J	1/10W 1/10W 1/10W 1/10W 1/10W	
R47 R48 R49 R50 R60-62			RK73GB2A101J RK73GB2A153J RK73GB2A332J RK73GB2A472J RK73GB2A561J	CHIP R CHIP R CHIP R CHIP R CHIP R	100 15K 3.3K 4.7K 560	J J J	1/10W 1/10W 1/10W 1/10W 1/10W	
R63,64 R65,66 R67,68			RK73GB2A152J RK73GB2A561J RK73GB2A102J	CHIP R CHIP R CHIP R	1.5K 560 1.0K	J J	1/10W 1/10W 1/10W	
S60-64		*	S70-0891-05	TACT SWIT	СН			
D1 D2 D3 D3 D4		*	ZS1033-T RB060L-40 DA204U MA143 DAN202U	SURGE AB DIODE DIODE DIODE DIODE	SORBEI	R		
D4 D30 D30 D31 D31			MA142WK DA204U MA143 DAN202U MA142WK	DIODE DIODE DIODE DIODE DIODE				
D40 D40 D41 D42 D42		*	DA204U MA143 ZS1033-T DA204U MA143	DIODE DIODE SURGE AB DIODE DIODE	SORBEI	R		

 $\underline{\ensuremath{\Lambda}}$  Indicates safety critical components.

# **PARTS LIST**

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### DISDLAY LIMIT (V14-6012-70)

Ref. No.	A d	N e w	Parts No.	Description	Desti- nation
D43 D44 D44 D45 D46-48		*	ZS1033-T DA204U MA143 ZS1033-T DAN202U	SURGE ABSORBER DIODE DIODE SURGE ABSORBER DIODE	
D46-48 D67 D67 D68 D69		*	MA142WK DA204U MA143 ZS1033-T DA204U	DIODE DIODE DIODE SURGE ABSORBER DIODE	
D69 D70 D71 D71 D72		*	MA143 ZS1033-T DA204U MA143 ZS1033-T	DIODE SURGE ABSORBER DIODE DIODE SURGE ABSORBER	
D73 D73 D74 D75 D75		*	DA204U MA143 ZS1033-T DA204U MA143	DIODE DIODE SURGE ABSORBER DIODE DIODE	
D76 D77 D77 D78 D79		*	ZS1033-T DA204U MA143 ZS1033-T DA204U	SURGE ABSORBER DIODE DIODE SURGE ABSORBER DIODE	
D79 D80 D81 D81 D82		*	MA143 ZS1033-T DA204U MA143 ZS1033-T	DIODE SURGE ABSORBER DIODE DIODE SURGE ABSORBER	
D83 D83 D84 D85 D85		*	DA204U MA143 ZS1033-T DA204U MA143	DIODE DIODE SURGE ABSORBER DIODE DIODE	
D86 D87 D87 D88 D89		*	ZS1033-T DA204U MA143 ZS1033-T DA204U	SURGE ABSORBER DIODE DIODE SURGE ABSORBER DIODE	
D89 D90 IC1 IC2 IC3		* * * *	MA143 ZS1033-T LM2936-5.0 BA05ST-V5 BA00AST-V5	DIODE SURGE ABSORBER ANALOGUE IC ANALOGUE IC ANALOGUE IC	
IC30 IC31 IC32 IC33 IC34			PST9142NR TC7WH123FU TC74HC04AF TC74HC32AF SN74LV74APWR	ANALOGUE IC MOS-IC MOS-IC MOS-IC MOS-IC	
Q1 Q1 Q2 Q2 Q40			2SA1576A 2SB1218A DTC144EUA UN5213 DTA144EUA	TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR	

				ISPLAY (	ЈИІТ (Х	14-691	2-70)
Ref. No.	pp,	N e w	Parts No.	De	scription		Desti- nation
Q40 Q41,42 Q41,42 Q43 Q43			UN5113 2SC4081 2SD1819A DTA144EUA UN5113	DIGITAL TRA TRANSISTOI TRANSISTOI DIGITAL TRA DIGITAL TRA	R R INSISTOR		
Q60-66 Q60-66			DTC114YUA UN5214	DIGITAL TRA			
		Ε	LECTRIC UNIT	Γ (X25-92	52-70)		
C1-5 C6 C7-15 C16 C17			CK73GB1H103K C94-0055-05 CK73GB1H103K CK73GB1C104K C94-0055-05	CHIP C ELECTRO CHIP C CHIP C ELECTRO	0.010UF 10UF 0.010UF 0.10UF 10UF	K 6.3WV K K 6.3WV	
C18 C19 C30,31 C32 C33		* *	CK73GB1C104K C90-5566-05 C90-5566-05 CK73GB1C104K CC73GCH1H102J	CHIP C ELECTRO ELECTRO CHIP C CHIP C	0.10UF 100UF 100UF 0.10UF 1000PF	K 6.3WV 6.3WV K J	
C34 C35 C36-38 C39 C40			CK73GB1C104K CC73GCH1H102J CC73GCH1H221J CC73GCH1H102J CK73GB1C104K	CHIP C CHIP C CHIP C CHIP C CHIP C	0.10UF 1000PF 220PF 1000PF 0.10UF	K J J K	
C41 C42 C43 C44 C45,46			CC73GCH1H221J CC73GCH1H102J CK73GB1C104K CC73GCH1H471J CK73GB1C104K	CHIP C CHIP C CHIP C CHIP C CHIP C	220PF 1000PF 0.10UF 470PF 0.10UF	J K J K	
C47 C48 C49,50 C51 C52			CC73GCH1H102J CK73GB1C104K CC73GCH1H080D CC73GCH1H102J CK73GB1H103K	CHIP C CHIP C CHIP C CHIP C CHIP C	1000PF 0.10UF 8.0PF 1000PF 0.010UF	J K D J K	
C53 C54 C55 C56 C70-82			C94-0055-05 CK73GB1C104K CC73GCH1H102J CK73GB1C104K CC73GCH1H221J	ELECTRO CHIP C CHIP C CHIP C CHIP C	10UF 0.10UF 1000PF 0.10UF 220PF	6.3WV K J K J	
C83 C84 C85 C86 C87			CK73GB1H103K CK73GB1C104K CC73GCH1H102J CK73GB1H103K CC73GCH1H102J	CHIP C CHIP C CHIP C CHIP C CHIP C	0.010UF 0.10UF 1000PF 0.010UF 1000PF	K K J K J	
C88 C90 C91 C92 C93		*	CK73GB1C104K C90-5566-05 CK73GB1C104K CC73GCH1H102J CK73GB0J105K	CHIP C ELECTRO CHIP C CHIP C CHIP C	0.10UF 100UF 0.10UF 1000PF 1.0UF	K 6.3WV K J K	
C94 C95 C96 C100 C101			CK73GB1H222K CK73GB1H103K CC73GCH1H102J C94-0055-05 CK73GB1C104K	CHIP C CHIP C CHIP C ELECTRO CHIP C	2200PF 0.010UF 1000PF 10UF 0.10UF	K K J 6.3WV K	
C102			C94-0056-05	ELECTRO	10UF	10WV	

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### **ELECTRIC UNIT (X25-9252-70)**

Teile ohne	Par		<b>lo.</b> werden nicht o	geliefert.							EL	ECTRIC UNIT (X2	5-9252-70)
Ref. No.	ρργ	N e w	Parts No.	De	escription		Desti- nation	Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation
C103 C104 C105 C106 C107-111			CK73GB1C104K CC73GCH1H050C CK73GB1H103K CC73GCH1H101J CC73GCH1H221J	CHIP C CHIP C CHIP C CHIP C CHIP C	0.10UF 5.0PF 0.010UF 100PF 220PF	K C K J J		L150 L151 L153,154 L156 L158-160		* * *	L33-1922-05 L92-0387-05 L92-0386-05 L40-4792-88 L92-0386-05	CHOKE COIL CHIP FERRITE CHIP FERRITE SMALL FIXED INDUCTOR CHIP FERRITE	
C112,113 C114-126 C130-140 C150 C151			CC73GCH1H150J CC73GCH1H221J CC73GCH1H221J CK73FB0J475K CK73GB1H103K	CHIP C CHIP C CHIP C CHIP C CHIP C	15PF 220PF 220PF 4.7UF 0.010UF	J J K K		L180 L181 L182 L183 X30		*	L40-4792-88 L92-0337-05 L40-4792-88 L92-0337-05 L77-2812-05	SMALL FIXED INDUCTOR CHIP FERRITE SMALL FIXED INDUCTOR CHIP FERRITE CRYSTAL RESONATOR(2)	
C153 C154 C156 C157 C159			CK73FB0J475K CK73GB1H103K CK73FB0J475K CK73GB1H103K CK73GB1H103K	CHIP C CHIP C CHIP C CHIP C CHIP C		K K K K		X150 CP1 ,2 CP31,32 CP33 CP34			L77-2715-05 R90-1014-05 R90-0748-05 R90-0720-05 R90-0748-05	CRYSTAL RESONATOR  MULTI-COMP 100 X  MULTI-COMP 47K X  MULTI-COMP 100K  MULTI-COMP 47K X	(4 X4
C160 C161 C162 C163 C164			C94-0055-05 CK73GB1C104K CC73GCH1H681J CK73GB1C104K CC73GCH1H681J	ELECTRO CHIP C CHIP C CHIP C CHIP C	10UF 0.10UF 680PF 0.10UF 680PF	6.3WV K J K J		CP130 CP150 CP151 R1			R90-1014-05 R90-1014-05 R90-0748-05 R90-1014-05 RK73GB2A101J	MULTI-COMP 100 >  MULTI-COMP 47K >  MULTI-COMP 47K >  MULTI-COMP 100 >  CHIP R 100 J 1/2	4 4 (4 4
C165 C166 C167 C168 C169,170			CC73GCH1H150J CK73GB1H103K CK73GB1C104K CC73GCH1H681J CC73GCH1H220J	CHIP C CHIP C CHIP C CHIP C CHIP C	15PF 0.010UF 0.10UF 680PF 22PF	J K J J		R30,31 R32 R33 R34,35			RK73GB2A1R0J RK73GB2A1R0J RK73GB2A103J RK73GB2A101J RK73GB2A473J	CHIP R 1.0 J 1/ CHIP R 1.0 J 1/ CHIP R 10K J 1/ CHIP R 100 J 1/	10W 10W 10W
C171 C172 C173 C174,175 C176			CK73GB1H103K CK73GB1C104K C94-0055-05 CK73GB1C104K CC73GCH1H681J	CHIP C CHIP C ELECTRO CHIP C CHIP C	0.010UF 0.10UF 10UF 0.10UF 680PF	K K 6.3WV K J		R36 R37 R38 R39 R40			RK73GB2A101J RK73GB2A103J RK73GB2A101J RK73GB2A103J RK73GB2A101J	CHIP R 100 J 1/ CHIP R 10K J 1/ CHIP R 100 J 1/ CHIP R 10K J 1/	10W 10W 10W
C177 C178 C180 C181,182 C183			C94-0055-05 CC73GCH1H221J CK73GB1C104K C94-0055-05 CK73GB1C104K	ELECTRO CHIP C CHIP C ELECTRO CHIP C	10UF 220PF 0.10UF 10UF 0.10UF	6.3WV J K 6.3WV K		R41 R42 R43-45 R46 R47			RK73GB2A473J RK73GB2A103J RK73GB2A473J RK73GB2A302J	CHIP R 47K J 1/2 CHIP R 10K J 1/2 CHIP R 47K J 1/2 CHIP R 3.0K J 1/2	10W 10W 10W 10W
C184 C185 C186 C187 C188			CC73GCH1H681J C94-0055-05 CK73GB1C104K C94-0055-05 CK73GB1C104K	CHIP C ELECTRO CHIP C ELECTRO CHIP C	680PF 10UF 0.10UF 10UF 0.10UF	J 6.3WV K 6.3WV K		R48 R49,50 R51 R52			RK73GB2A201J RK73GB2A103J RK73GB2A473J RK73GB2A102J RK73GB2A105J RK73GB2A103J	CHIP R 10K J 1/ CHIP R 47K J 1/ CHIP R 1.0K J 1/ CHIP R 1.0M J 1/	10W 10W 10W 10W
C189			CC73GCH1H681J	CHIP C	680PF	J		R53 R54,55			RK73GB2A103J RK73GB2A473J	CHIP R 10K J 1/ CHIP R 47K J 1/	-
CN1 CN70 CN100 CN130 J180			E40-9656-05 E41-2042-05 E40-9689-05 E41-0171-05 E58-0987-05	FLAT CABLE PIN ASSY FLAT CABLE PIN ASSY RECTANGUL	CONNEC	TOR		R56 R57,58 R59 R60 R61,62			RK73GB2A101J RK73GB2A473J RK73GB2A103J RK73GB2A473J RK73GB2A101J	CHIP R 100 J 1/ CHIP R 47K J 1/ CHIP R 10K J 1/ CHIP R 47K J 1/ CHIP R 47K J 1/ CHIP R 100 J 1/	10W 10W 10W
L1,2 L3 L30 L70 L71-73		*	L92-0383-05 L92-0337-05 L92-0387-05 L92-0383-05 L92-0387-05	CHIP FERRI CHIP FERRI CHIP FERRI CHIP FERRI CHIP FERRI	TE TE TE			R70,71 R90 R91 R92 R93,94			RK73GB2A473J RK73GB2A100J RK73GB2A104J RK73GB2A394J RK73GB2A473J	CHIP R 47K J 1, CHIP R 10 J 1, CHIP R 100K J 1, CHIP R 390K J 1, CHIP R 47K J 1,	10W 10W 10W
L100,101 L103 L130		*	L92-0383-05 L92-0386-05 L92-0337-05	CHIP FERRI CHIP FERRI CHIP FERRI	TE			R100-103 R130-135 R150			RK73GB2A101J RK73GB2A101J RK73GB2A473J	CHIP R 100 J 1/ CHIP R 100 J 1/ CHIP R 47K J 1/	10W 10W

E: Europe

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### **ELECTRIC UNIT (X25-9252-70)**

Ref. No.	A d d	N e w	Parts No.	Description	Desti- nation
R151 R153 R154,155 R156,157 R158	-		RK73GB2A183J RK73GB2A750J RK73GB2A101J RK73GB2A103J RK73GB2A470J	CHIP R 18K J 1/10W CHIP R 75 J 1/10W CHIP R 100 J 1/10W CHIP R 10K J 1/10W CHIP R 47 J 1/10W	
R159 R162,163 R164 R165 R166			RK73GB2A103J RK73GB2A103J RK73GB2A394J RK73GB2A222J RK73GB2A103J	CHIP R 10K J 1/10W CHIP R 10K J 1/10W CHIP R 390K J 1/10W CHIP R 2.2K J 1/10W CHIP R 10K J 1/10W	
R167-170 R171 R172 R173 R180,181			RK73GB2A101J RK73GB2A473J RK73GB2A101J RK73GB2A103J RK73GB2A273J	CHIP R 100 J 1/10W CHIP R 47K J 1/10W CHIP R 100 J 1/10W CHIP R 10K J 1/10W CHIP R 27K J 1/10W	
R182 W2 W31 W100,101 W152			RK73GB2A100J R92-2053-05 R92-1252-05 R92-1252-05 R92-1252-05	CHIP R 10 J 1/10W CHIP R 0 J 1/8W CHIP R 0 OHM J 1/16W CHIP R 0 OHM J 1/16W CHIP R 0 OHM J 1/16W	
W154 W156,157 W158,159			R92-1252-05 R92-1252-05 R92-2053-05	CHIP R 0 OHM J 1/16W CHIP R 0 OHM J 1/16W CHIP R 0 J 1/8W	
D1 D1 D30 D30 D31,32			DAN202U MA142WK DAP202U MA142WA DAN202U	DIODE DIODE DIODE DIODE DIODE	
D31,32 D33 D33 D34 D34			MA142WK DA204U MA143 DAN202U MA142WK	DIODE DIODE DIODE DIODE DIODE	
D70,71 D70,71 D72 D72 D90			DAP202U MA142WA DAN202U MA142WK MA3062WA	DIODE DIODE DIODE DIODE ZENER DIODE	
D91 D91 D150 D150 IC1			DAP202U MA142WA DA204U MA143 L88M33T	DIODE DIODE DIODE DIODE ANALOGUE IC	
IC30 IC70 IC71 IC90 IC91		* * *	HD64F2626FA20I SN74LV74APWR TC7S00F TA8007F M24C08WDW6T	MICROPROCESSOR IC MOS-IC MOS-IC ANALOGUE IC MEMORY IC	
IC150 IC151 IC152 Q30 Q30		*	AK4112B OS8104AQR TC7SH08FU DTA114EUA UN5111	MOS-IC MOS-IC MOS-IC DIGITAL TRANSISTOR DIGITAL TRANSISTOR	
Q70,71			DTC144EUA	DIGITAL TRANSISTOR	

Ref. No.	A d d	N e w	Parts No.	De	escription		Desti- nation
Q70,71 Q180 Q180 Q181 Q181	DTC144EUA DIGITAL TRANSISTOR UN5213 DIGITAL TRANSISTOR DTA144EUA DIGITAL TRANSISTOR DTA144EUA DIGITAL TRANSISTOR						
			MD UNIT (X	33-3170-0	00)		
C1 C2 C3 C4,5 C6			CC73GCH1E102J C92-0628-05 CK73GB1H103K C92-0628-05 CK73GB1E223K	CHIP C CHIP-TAN CHIP C CHIP-TAN CHIP C	1000PF 10UF 0.010UF 10UF 0.022UF	10WV	
C7 C8,9 C10 C11 C12			CK73GB1C104K CK73GB1H103K CK73GB1E223K CK73GB1C104K CK73GB0J105K	CHIP C CHIP C CHIP C CHIP C CHIP C	0.10UF 0.010UF 0.022UF 0.10UF 1.0UF		
C13 C14 C15 C16 C17			CK73FB0J475K CK73GB1H103K CK73GB1H472K CK73GB1C104K CK73GB1H472K	CHIP C CHIP C CHIP C CHIP C CHIP C	4.7UF 0.010UF 4700PF 0.10UF 4700PF	K K K K	
C18 C19 C20 C21 C22			CK73GB1A224K CK73GB0J105K CK73GB1C104K CK73GB1A474K CK73GB1H103K	CHIP C CHIP C CHIP C CHIP C CHIP C	0.22UF 1.0UF 0.10UF 0.47UF 0.010UF	K K K K	
C23 C24 C25 C26 C27			CK73GB1A474K CC73GCH1H101J CK73GB1H153K CK73GB0J105K CK73GB1C104K	CHIP C CHIP C CHIP C CHIP C CHIP C	0.47UF 100PF 0.015UF 1.0UF 0.10UF	K J K K	
C28 C30 C31 C32 C33			CK73FB0J475K CK73GB1C104K CK73FB0J475K CK73GB1H103K CK73GB0J105K	CHIP C CHIP C CHIP C CHIP C CHIP C	4.7UF 0.10UF 4.7UF 0.010UF 1.0UF	K K K K	
C35,36 C37 C38-49 C50 C51			CK73GB1C104K CK73GB1H103K CK73GB1C104K CK73FB0J475K CK73GB1C104K	CHIP C CHIP C CHIP C CHIP C CHIP C	0.10UF 0.010UF 0.10UF 4.7UF 0.10UF	K K K K	
C52,53 C55-58 C59-61 C62-65 C66			C92-1324-05 CK73GB1H222K CK73GB1C104K CK73GB1E223K C92-1429-05	CHIP-TAN CHIP C CHIP C CHIP C ELECTRO	4.7UF 2200PF 0.10UF 0.022UF 220UF	16WV K K K 6.3WV	
C67 C69-71 C72 C73 C74			CK73GB1C104K CK73FB1A225K C92-0628-05 CK73FB1A225K CK73EB0J106K	CHIP C CHIP C CHIP-TAN CHIP C CHIP C	0.10UF 2.2UF 10UF 2.2UF 10UF	K K 10WV K K	
C93 C94 C95,96 C97			CK73GB1C104K CK73GB1H103K CK73GB1H102K CK73GB1C104K	CHIP C CHIP C CHIP C CHIP C	0.10UF 0.010UF 1000PF 0.10UF	K K K	

# **PARTS LIST**

\* New parts
Parts without Parts No. are not supplied.
Les articles non mentionnes dans le Parts No. ne sont pas fournis.

**MD UNIT (X33-3170-00)** 

		ts N	<b>lo.</b> werden nicht (		Desti-
Ref. No.	d d	e W	Parts No.	Description	nation
C98			CK73GB1H102K	CHIP C 1000PF K	
CN1 CN2 CN3 CN4 CN5			E40-9693-05 E40-9713-05 E40-9661-05 E40-8078-05 E40-9714-05	FLAT CABLE CONNECTOR FLAT CABLE CONNECTOR FLAT CABLE CONNECTOR PIN ASSY FLAT CABLE CONNECTOR	
CN6			E40-9373-05	FLAT CABLE CONNECTOR	
L1 L2-6 L7 X2		*	L92-0322-05 L92-0329-05 L92-0385-05 L78-0571-05	CHIP FERRITE CHIP FERRITE CHIP FERRITE RESONATOR	
CP1 CP2 CP3 CP4 CP5			R90-0726-05 R90-0722-05 R90-0724-05 R90-0719-05 R90-1014-05	MULTI-COMP         10K X2           MULTI-COMP         2.2K X4           MULTI-COMP         1K X4           MULTI-COMP         4.7K X2           MULTI-COMP         100 X4	
CP6 CP7 CP8 CP9-11 CP12			R90-1019-05 R90-0720-05 R90-1014-05 R90-0720-05 R90-1019-05	MULTI-COMP         100 X2           MULTI-COMP         100K X4           MULTI-COMP         100 X4           MULTI-COMP         100K X4           MULTI-COMP         100 X2	
CP13 R1 R2 R3 R4			R90-0737-05 RK73GB2A472J RK73GB2A474J RK73GB2A104J RK73EB2E4R7J	MULTI-COMP 100K X2 CHIP R 4.7K J 1/10W CHIP R 470K J 1/10W CHIP R 100K J 1/10W CHIP R 4.7 J 1/4W	
R5 R6 R7 R8 R9			RK73GB2A151J RK73GB2A474J RK73GB2A472J RK73GB2A103J RK73GB2A913J	CHIP R 150 J 1/10W CHIP R 470K J 1/10W CHIP R 4.7K J 1/10W CHIP R 10K J 1/10W CHIP R 91K J 1/10W	
R10 R12 R13-15 R16 R17			RK73GB2A333J RK73GB2A562J RK73GB2A133J RK73GB2A151J RK73GB2A473J	CHIP R 33K J 1/10W CHIP R 5.6K J 1/10W CHIP R 13K J 1/10W CHIP R 150 J 1/10W CHIP R 47K J 1/10W	
R18 R19 R20 R21 R22			RK73GB2A101J RK73GB2A563J RK73GB2A101J RK73GB2A331J RK73GB2A681J	CHIP R 100 J 1/10W CHIP R 56K J 1/10W CHIP R 100 J 1/10W CHIP R 330 J 1/10W CHIP R 680 J 1/10W	
R23,24 R25 R26 R27 R28			RK73GB2A473J RK73GB2A684J RK73GB2A102J RK73GB2A104J RK73GB2A332J	CHIP R 47K J 1/10W CHIP R 680K J 1/10W CHIP R 1.0K J 1/10W CHIP R 100K J 1/10W CHIP R 3.3K J 1/10W	
R29 R30 R31 R34 R35			RK73GB2A102J RK73GB2A151J RK73GB2A103J RK73GB2A681J RK73GB2A394J	CHIP R 1.0K J 1/10W CHIP R 150 J 1/10W CHIP R 10K J 1/10W CHIP R 680 J 1/10W CHIP R 390K J 1/10W	
R36 R37			RK73GB2A103J RK73GB2A101J	CHIP R 10K J 1/10W CHIP R 100 J 1/10W	

MID UNIT (X33-3170-00								
Ref. No.	Αdd	N e w	Parts No.	LIASCRIPTION	Desti- nation			
R40 R41 R42 R43 R44			RK73GB2A103J RK73GB2A102J RK73GB2A103J RK73GB2A104J RK73GB2A472J	CHIP R 10K J 1/10W CHIP R 1.0K J 1/10W CHIP R 10K J 1/10W CHIP R 100K J 1/10W CHIP R 4.7K J 1/10W				
R45 R47 R48 R51 R53			RK73GB2A102J RK73GB2A103J RK73GB2A101J RK73GB2A104J RK73GB2A472J	CHIP R 1.0K J 1/10W CHIP R 10K J 1/10W CHIP R 100 J 1/10W CHIP R 100K J 1/10W CHIP R 4.7K J 1/10W				
R55 R64-67 R68-75 R76,77 R78,79			RK73GB2A201J RK73GB2A183J RK73GB2A472J RK73GB2A333J RK73GB2A163J	CHIP R 200 J 1/10W CHIP R 18K J 1/10W CHIP R 4.7K J 1/10W CHIP R 33K J 1/10W CHIP R 16K J 1/10W				
R80,81 R82-87 R105,106 R107			RK73GB2A203J RK73GB2A103J RK73GB2A102J RK73GB2A472J	CHIP R 20K J 1/10W CHIP R 10K J 1/10W CHIP R 1.0K J 1/10W CHIP R 4.7K J 1/10W				
D1 D1 D3 IC1 IC2			DAN202U MA142WK MA8056-M CXA2523AR S-817A25ANB	DIODE DIODE ZENER DIODE ANALOGUE IC MOS-IC				
IC3 IC7 IC8 IC9 IC10			CXD2667R L88MS33T TC74HCT7007AF 780076YGK-R14 BR24C02FV-W	MOS-IC ANALOGUE IC MOS-IC MICROCONTROLLER IC ROM IC				
IC10 IC11 IC12 IC13-15 IC16			M24C02WDW6T S-24C01AFJA BA5983FM LB1930M TC7SHU04FU	MEMORY IC ROM IC ANALOGUE IC ANALOGUE IC MOS-IC				
Q1 Q2 Q2 Q3 Q4			2SB1295 DTA114EUA UN5111 2SC4116(Y) DTA114EUA	TRANSISTOR DIGITAL TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR				
Q4 Q5 Q6 Q6 Q7			UN5111 FMG3A 2SA1576A 2SB1218A DTC143EUA	DIGITAL TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR TRANSISTOR DIGITAL TRANSISTOR				
Q8 Q8 Q9 Q9 Q10			DTA114EUA UN5111 2SC4081 2SD1819A 2SB1202	DIGITAL TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR				
Q11 TH1			DTC143EUA TN20-3T333JT	DIGITAL TRANSISTOR THERMISTOR				
	MI	O N	IECHANISM A	SSY (X92-4560-00)				
1 2	3B 1A	*	A10-4638-18 A10-5040-08	CHASSIS CALKING ASSY (MAIN) CHASSIS CALKING ASSY (BASE)				

E: Europe

 $\underline{\ensuremath{\Lambda}}$  Indicates safety critical components.

# **PARTS LIST**

### MD MECHANISM ASSY (X92-4560-00)

		N	<b>lo.</b> werden nicht	gelielert.	Dect
Ref. No.	A d d	e	Parts No.	Description	Desti- nation
3	2D		A10-4640-18	CHASSIS CALKING ASSY (PU)	
C700	1B		C92-0628-05	CHIP-TAN 10UF 10WV	
7 8 9 10 11	3A 1B 1A 1B 1A	*	D10-4340-18 D10-4344-18 D10-4684-08 D10-4348-18 D10-4353-08	LEVER (LOCK PLATE) LEVER (PUCHASSISLOCK) SLIDER (MODE CHANGE) SLIDER (SENSE PLATE M) ARM (GUIDE ARM)	
12 13 14 18	3B 2A 2B 3C	*	D10-4725-08 D10-4405-08 D10-4406-18 D13-1465-08	SLIDER ARM ASSY (LINK ARM) SLIDER ASSY (SENSE PLATE F) GEAR (F DRIVE GEAR)	
19 20 21 22 23	2A 1A 1A 2A 3D		D13-1469-08 D13-1470-08 D13-1471-08 D13-1473-08 D13-2034-08	GEAR (GEAR 1) GEAR (GEAR 2) GEAR (GEAR 3) GEAR (WORM) GEAR ASSY (LEAD SCREW)	
26 27 28 29 30	1B 1A 1A 1A 2D	*	D14-0720-18 D14-0775-08 D14-0729-18 D14-0782-08 D14-0731-08	ROLLER (SENSE) ROLLER (LOAD/EJECT) ROLLER ASSY (PROTECT) ROLLER (MODE CHANGE) ROLLER (S GUIDE C)	
33 36 37 38 41	2A 3D 3C 1B 3D		D19-0634-28 D21-2324-08 D21-2325-08 D21-2326-08 D23-0944-08	CLUTCH ASSY SHAFT (PU MAIN) SHAFT (PU SUB) SHAFT (CASE PIN) RETAINER (LEAD SCREW)	
42 43	1A 2C	*	D32-0643-08 D39-0258-04	STOPPER (INNER STOPPER) DAMPER	
51 52 53 54 55	2A 2A 1A 1A 1A	*	G01-2974-08 G01-2975-08 G01-2976-08 G01-2973-08 G01-3166-08	EXTENSION SPRING (LINK ARM) EXTENSION SPRING (SENSE) EXTENSION SPRING EXTENSION SPRING TORSION COIL SPRING	
56 57 58 59 60	2C 1D 2D 1B 3A		G01-2979-08 G01-2980-08 G01-2981-08 G01-2982-08 G01-2983-08	COMPRESSION SPRING (LEFT SIDE) EXTENSION SPRING COMPRESSION SPRING (RIGHT SIDE) TORSION COIL SPRING EXTENSION SPRING	
63 64 65 66 67	3B 2C 3C 3C 3D		G02-1320-18 G02-1321-08 G02-1322-08 G02-1323-08 G02-1324-08	FLAT SPRING (THRUST A) FLAT SPRING (F THRUST) FLAT SPRING (F LEAD) FLAT SPRING (PU SHAFT A) FLAT SPRING (PU SHAFT B)	
68	3C		G02-1325-08	FLAT SPRING (SUB SLIDER)	
75 76 77 78 79	2B 1B 1B 1B 2C	*	J19-4924-08 J19-5152-08 J19-4926-18 J19-4927-18 J19-4932-08	HOLDER (CASE A) HOLDER (CASE B) HOLDER (CASE C) HOLDER (CASE D) DAMPER	
80 81	1C 1D		J19-4967-18 J19-4968-08	HOLDER ASSY (CONTAINER L) HOLDER ASSY	

Ref. No.	A d d	N e	Parts No.	Description	Desti-
82	<b>d</b> 1C	w	J19-4969-08	HOLDER ASSY (CONTAINER R)	nation
85	2A	*	J21-9855-08	MOUTING HARDWARE (SIDE PLATE)	
86 87	3A 1A		J21-9403-08 J21-9404-08	MOUTING HARDWARE (RINK A) MOUTING HARDWARE (RINK B)	
88	3D		J21-9407-18	MOUTING HARDWARE (F SCREW)	
89	2C		J21-9410-08	MOUTING HARDWARE (CUSHION) MOUTING HARDWARE ASSY (SHUTTER)	
90 91	3A 2A		J21-9476-08 J21-9477-08	MOUTING HARDWARE ASSY (SHUTTER) MOUTING HARDWARE (GEAR PLATE)	
92	2A	*	J21-9967-08	MOUTING HARDWARE ASSY (G PLA B)	
93	2C		J21-9479-08	MOUTING HARDWARE ASSY (G PLA F)	
94 95	2D 1C		J21-9480-08 J21-9481-08	MOUTING HARDWARE ASSY (PU S R) MOUTING HARDWARE ASSY (PU S L)	
98	3D		J31-1043-08	COLLAR	
106	1B 1A	*	J90-1036-08	GUIDE (GUIDE RAIL R)	
107		*	J90-1054-08	RAIL ASSY (GUIDE RAIL L)	
MFPC1 MFPC2	2A 1B		J84-0095-08 J84-0096-18	FLEXIBLE PRINTED WIRING BOARD FLEXIBLE PRINTED WIRING BOARD	
MFPC3	2C		J84-0097-08	FLEXIBLE PRINTED WIRING BOARD	
MFPC4	1D		J84-0098-08	FLEXIBLE PRINTED WIRING BOARD	
A B	3A 1A		N09-4346-08 N09-4341-08	MACHINE SCREW (M2X3) MACHINE SCREW (M2X2)	
С	2A		N09-4342-08	MACHINE SCREW (M1.4X2 BLK)	
D E	1B 1A		N09-4343-08	MACHINE SCREW (M1.7X2 BLK)	
_			N19-1134-08		
F G	2A 1A		N19-2140-08 N19-2141-08	FLAT WASHER   FLAT WASHER	
Н	2D		N24-3012-45	E-RING	
J K	2D 3B	*	N24-3015-45 N09-6074-08	E-RING MACHINE SCREW (M2X2)	
L	2C	*	N09-6075-08	MACHINE SCREW (M1.7X2 BLK)	
MVR1	1B		R33-0203-08	VARIABLE RESISTOR (LPS)	
MS1	1A		S68-0846-05	PUSH SWITCH (OS)	
MS2-6	1A		S68-0844-08	PUSH SWITCH (CS,FS,MS,LS,TS)	
MS7 MS8-10	1D 1B		S68-0848-08 S68-0845-08	PUSH SWITCH (PS) PUSH SWITCH (SS1-3)	
MM1	2D		T42-1010-08	MOTOR ASSY (SPINDLE MOTOR)	
MM2	2C		T42-1009-08	MOTOR ASSY (SLED MOTOR)	
MM3,4 MM5	2A 2A		T42-1008-08 T42-1007-08	MOTOR ASSY (LO/EJ, MODE MOTOR) MOTOR ASSY (ELEVATOR MOTOR)	
MPU1	3C		T25-0219-05	OPTICAL PICKUP HEAD	

### **SPECIFICATIONS**

		Normal	Limit
Back up Current			
MOST OFF		0.03mA	0.01~0.10mA
Current Consump	tion		
MOST ON	MD Stop (No Play)	0.3A	≦0.4A
	MD Play	0.6A	≦0.9A
Weight		1.4kg	
OPT Power	Output Tx	-6.5dBm	-8.5~-1.5dBm

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KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

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